

REMARKS

This Amendment is fully responsive to the non-final Office Action dated September 30, 2008, issued in connection with the above-identified application. Claims 1-11 are pending in the present application. With this Amendment, claims 1-11 have been amended. No new matter has been introduced by the amendments made to the claims. Favorable reconsideration is respectfully requested.

To facilitate the Examiner's reconsideration of the present application, the Applicants have provided amendments to the specification and the abstract. The changes to the specification and the abstract include minor editorial and clarifying changes. Replacement paragraphs and a new abstract are enclosed. No new matter has been introduced by the amendments made to the specification and the abstract.

In the Office Action, claims 10 and 11 have been rejected under 35 U.S.C. 101 for allegedly being directed to non-statutory subject matter. Specifically, the Examiner alleges that the claims do not fall within one of the four enumerated categories of patentable subject matter given that the claims are directed to a program *per se*. The Applicants have herein amended claims 10 and 11 to point out that the programs are recorded on a computer-readable medium. As amended, claims 10 and 11 are now clearly directed to patentable subject matter. Withdrawal of the rejection under 35 U.S.C. 101 is respectfully requested.

In the Office Action, claims 1-3, 5, 6, 8 and 10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Naruse et al. (U.S. Publication No. 2002/0183026, hereafter "Naruse") in view of Roman et al. (U.S. Publication No. 2004/0154043, hereafter "Roman"). The Applicants have amended independent claims 1 and 8 to help further distinguish the present invention from the cited prior art. For example, claim 1 (as amended) recites the following features:

"[a] content reproduction device that performs streaming reproduction of a content, the device comprising:

a plurality of communication units, each being configured to receive a content transmitted in segments from a content transmission device over a communication path;
a content reconstruction unit having a buffer in which each segmented data of the content

received by a corresponding one of said plurality of communication units is temporarily accumulated, and configured to reconstruct each segmented data accumulated in the buffer into the content before the segmentation of the data;

a reproduction unit configured to extract the content before the segmentation of the data from the buffer at a predetermined bit rate and to reproduce the content before the segmentation of the data at the predetermined bit rate, the content, before the segmentation of the data, having been reconstructed by said content reconstruction unit; and

a communication control unit configured to:

calculate, for every predetermined time, target transmission speeds to be assigned for content reception by causing the target transmission speeds to associate respectively with said plurality of communication units, based on free space in the buffer and the bit rate; and

transmit a first request signal indicating the calculated target transmission speeds corresponding to said plurality of communication units to the content transmission device via one of said plurality of communication units;

wherein said plurality of communication units receive part of the segmented data of the content obtained by segmenting data of a single content.” (Emphasis added).

The features emphasized above in claim 1 are similarly recited in independent claim 8 (as amended). Additionally, the features noted above are fully supported by the Applicants’ disclosure (see e.g., Fig. 3 and pgs. 13-15).

The present invention is distinguishable over the cited prior art in that a single content is transmitted in segments; and each of a plurality of communication units receives part of the segmented data of content. Specifically, a content reproduction device that performs streaming reproduction of content includes a plurality of communication units, and each communication unit receives a content transmitted in segments from a content transmission device over a communication path.

Additionally, a content reconstruction unit that has a buffer in which each segmented data of the content received by each of the communication units is temporarily accumulated, reconstructs each segmented data accumulated in the buffer into the content. With this structure, it is possible to ensure a transmission speed required for streaming reproduction by using a plurality of communication units and by determining a communication unit to be used and a

target transmission speed assigned to it, based on a free space on the buffer and the bit rate.

In the Office Action, the Examiner relies on Naruse in view of Roman for disclosing or suggesting all the features recited in independent claims 1 and 8. Specifically, the Examiner alleges that Naruse discloses or suggests all the features of claims 1 and 8 except for the claimed plurality of communication units receiving content transmitted in segments from a content transmission device. However, the Examiner relies on Roman for overcoming the above deficiency in Naruse and for disclosing this feature.

However, the Applicants assert that Naruse in view of Roman fails to disclose or suggest the feature recited in independent claims 1 and 8, as amended. In particular, the Applicants assert that Naruse in view of Roman fails to disclose at least a plurality of communication units that receive part of the segmented data of the content obtained by segmenting data of a single content such that a content reconstruction unit, having a buffer in which each segmented data of the content received by the plurality of communication units is temporarily accumulated, reconstructs each segmented data into the content.

Naruse discloses a system that assures the communication quality best suited to the type of data communicated between a transmission system and a receiver. As described in Naruse, the system determines a bit error rate as it corresponds to the type of contents (moving picture data, text data or audio data) to be requested to the server, and corrects the transmission speed based on the determined bit error rate and the CIR (see e.g., ¶ [0051]). However, as correctly noted by the Examiner, Naruse fails to disclose or suggest a plurality of communication units receiving content transmitted in segments from a content transmission device. Therefore, independent claims 1 and 8 (as amended) are clearly distinguished over Naruse. Additionally, Roman fails to overcome the deficiencies noted above in Naruse.

Roman merely discloses a method and system for delivering electrical signals from a cable network to a telecommunications network, which may include a plurality of communication units or devices. Therefore, at best, the combination of Naruse and Roman would result in an apparatus for transmitting and receiving separate contents by separate communication units in accordance with each type of content.

The combination of Naruse and Roman still fails to disclose or suggest a plurality of communication units that receive part of the segmented data of the content obtained by segmenting data of a single content such that a content reconstruction unit, having a buffer in which each segmented data of the content received by the plurality of communication units is temporarily accumulated, reconstructs each segmented data into the content.

Based on the above discussion, no combination of Naruse and Roman would result in, or otherwise render obvious, independent claims 1 and 8 (as amended). Likewise, no combination of Naruse or Roman would result in, or otherwise render obvious, claims 2, 3, 5, 6 and 10 at least by virtue of their respective dependencies from independent claims 1 and 8.

In the Office Action, claims 4, 7, 9 and 11 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Naruse in view of Roman, and further in view of Delavega et al. (U.S. Publication No. 2005/0034158, hereafter “Delavega”).

Independent claims 7 and 9 have been amended to further distinguish the present invention from the cited prior art. More specifically, claims 7 and 9 have been amended similar to independent claims 1 and 8, as noted above. That is, claims 7 and 9 have been amended to point out that “a plurality of communication units receive part of the segmented data of the content obtained by segmenting data of a single content.” Accordingly, independent claims 7 and 9 (as amended) are distinguishable over the cited prior art for similar reasons noted above for independent claims 1 and 8.

For example, no combination of Naruse and Roman discloses or suggests a plurality of communication units that receive part of the segmented data of the content obtained by segmenting data of a single content such that a content reconstruction unit, having a buffer in which each segmented data of the content received by the plurality of communication units is temporarily accumulated, reconstructs each segmented data into the content.

Additionally, after a detailed review of Delvega, the reference fails to overcome the deficiencies noted above in Naruse and Roman. Therefore, no combination of Naruse, Roman and Delvega would result in, or otherwise render obvious, the independent claims 7 and 9 (as amended). Likewise, no combination of Naruse, Roman and Delvega would result in, or otherwise render obvious, claim 11 at least by virtue of its dependency from claim 9.

With regard to claim 4, the claim depends from independent claim 1. As noted above, Naruse and Roman fail to disclose or suggest all the features of claim 1 (as amended), and Delvega fails to overcome the deficiencies noted above in Naruse and Roman. Accordingly, no combination of Naruse, Roman and Delvega would result in, or otherwise render obvious, claim 4 at least by virtue of its dependency from independent claim 1.

In light of the above, the Applicants respectfully submit that all the pending claims are patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the outstanding Office Action, and pass the present application to issue.

Respectfully submitted,

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